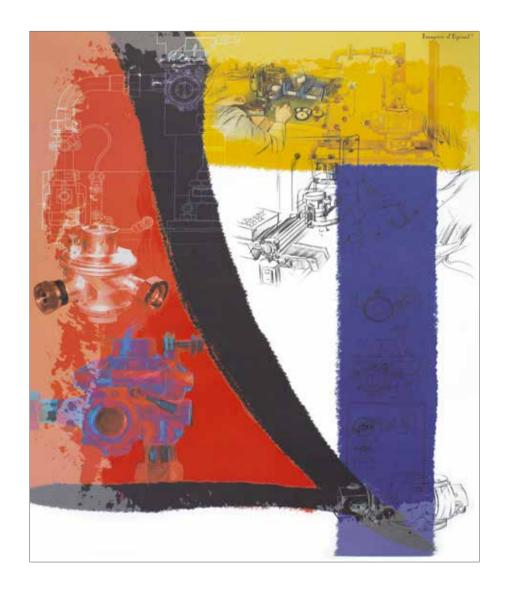


Gas Solutions



Pressure Regulators for Natural Gas







Divisions













LPG REGULATORS

LPG VALVES AND TANK EQUIPMENT

COMPRESSED GAS EQUIPMENT

NATURAL GAS AND METERING

ALTERNATIVE FUEL SYSTEMS

ENGINEERING AND SERVICES









































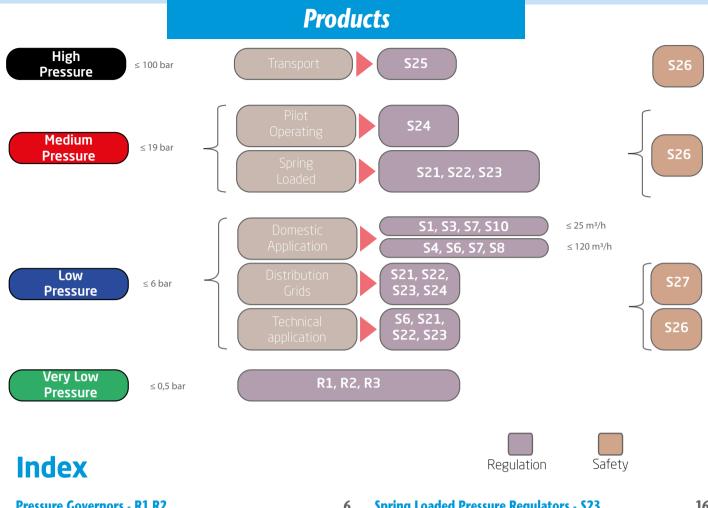












Pressure Governors - R1,R2	6
Single Stage Pressure Regulators - S1	7
Double Stage Pressure Regulators - S3	8
Double Stage Pressure Regulators - S4	9
Double Stage Pressure Regulators - S7	10
Single Stage Pressure Regulators - \$10	11
Double Stage Pressure Regulators - S8	12
Double Stage Pressure Regulators - S5,S6	13
Spring Loaded Pressure Regulators - S21	14
Spring Loaded Pressure Regulators - S22	15

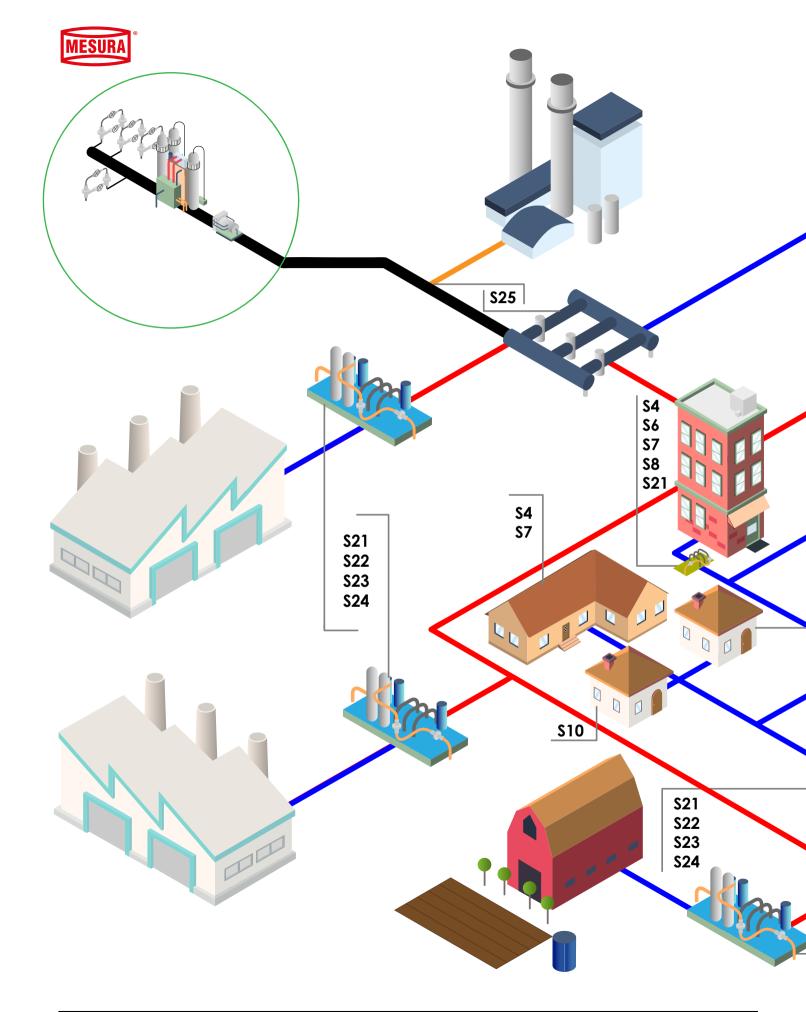
Spring Loaded Pressure Regulators - S23	16
Pilot Operating Pressure Regulators - \$24	17
Pilot Operating Pressure Regulators -S25	18
Safety Valves - S26	19
Relief Valves - S27	20
Regulator equipped with anti-flooding hood	21

About Mesura

Mesura SAS was founded in 1949 with headquarters in Forbach in east France. It is the head of a group of companies that design, manufacture and sell components, systems and services for regulating and measuring Natural Gas. Today Mesura SAS has production plants in France, Tunisia, India and Italy. In 2012, Mesura SAS joined the Cavagna Group, one of the top manufacturers of equipment and components for compressed gas control (gases for energy, alternative fuel gases, medical gases, industrial gases, cryogenic gases and special gases).

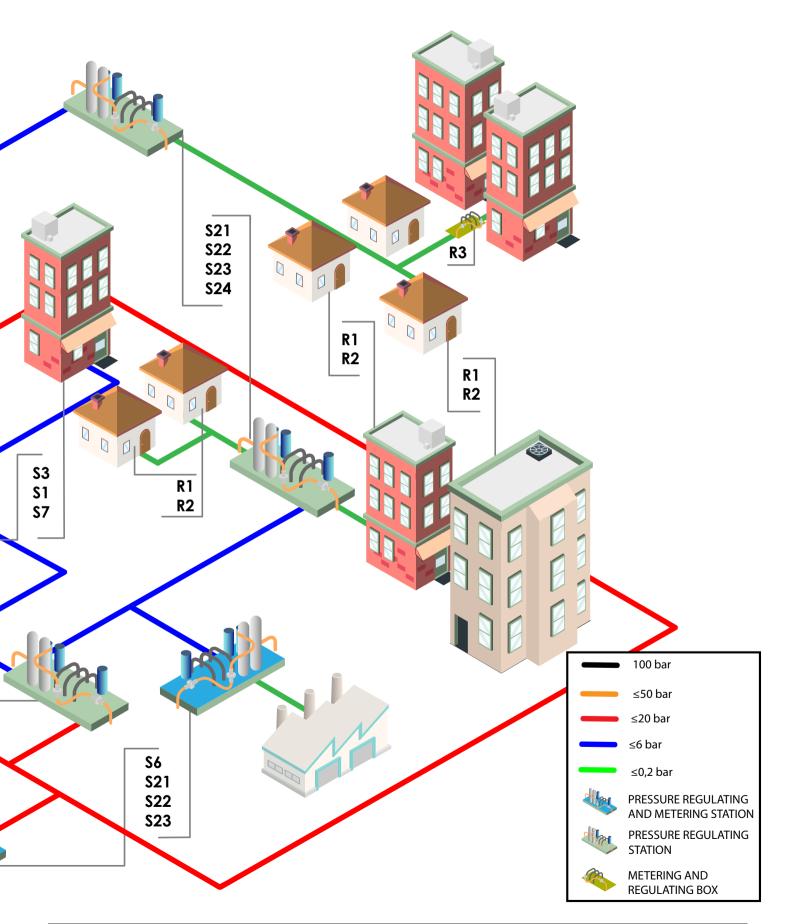
About Cavagna Group

Since 1949, the Cavagna Group has been supplying industries and consumers worldwide, to become today's leading manufacturer of Equipment and fittings for compressed gases, gas storage and Control. With nine vertically integrated production units in Italy, nine others spread on five continents and a distribution network covering over 145 countries throughout the world, Cavagna Group offers only the best, most reliable and dynamic services to the customers.



Natural Gas Applications





Pressure Governors

R1-R2

1 SCOPE

The **R1** and **R2** series regulators are a line of direct action type pressure governors, normally used for domestic applications, generally installed directly to the meter or in installations in gas grids for natural and manufactured gas, lpg, or other non-corrosive preliminarily treated stable gas.



2 FEATURES

- · Body in alluminium die-cast
- · Available as type A (regulator)
- · Available as type F (regulator + UPSO)
- · UPSO device with automatic or manual re-arming
- · Fixed setting
- · Sealable
- · Anti-Tampering construction
- · Built-in filter (upon request)
- · Suitable for outdoor installation
- · Painting on request

3 TECHNICAL DATA

	Layout	inlet Pressure	Outlet Pressure	Nominal Capacity (m³/h)	Regulating class (AC)	Closing pressure class (SG)	Working temp. (°C)	Connections
R1	N M	0,4	12 ÷ 55	6 - 12,5	10	20 (P=0,2) 30 (P=0,4)	-20 ÷ 60	1/2" 3/4" 7/8"
R2	N M H	0,2	12 ÷ 37	6		20		1"

- · M: Straight connection
- · N: Angle connection
- · H: Angle Horizontal connection



Double Stage Pressure Regulators



S1

1 SCOPE

The **\$1** series regulators are a line of direct action type pressure regulators, double stage, normally used for domestic applications, if directly assembled to the meter or in decompression installations in gas grids and industrial uses for natural and manufactured gas, lpg, or other non-corrosive preliminarily treated stable gas.



2 FEATURES

- · Body in zamak (ZA4G)
- · Available as type B (excess flow)
- · Available as type C (OPSO and excess flow)
- · Available as type D (OPSO and UPSO)
- · Built-in pressure relief valve
- · UPSO device available with manual or automatic re-arming
- · Pressure test nipple
- · Adjustable settings or fixed set-point
- · Painting on request
- · Arctic version: working temperature -40 ÷ 60°C

3 TECHNICAL DATA

	Layout	Inlet Pressure	Outlet Pressure	Nominal Capacity (m³/h)	Regulating class (AC)	Closing pressure class (SG)	Working temp. (°C)	Connections
		bar	mbar		` ,	· · ·	, ,	
	N			6				
S1	М	0,5 ÷ 5	11 ÷ 100	10	10 25 6 10 25	up to 20	-20 ÷ 60	See table
	U			25				
	N			6				
S1 BCH	М	M 1 ÷ 5 100 ÷ 300	100 ÷ 300	10				
RCH	U			25				

- · N: Angle connection
- · M: Straight connection
- · U: Bottom entry



Double Stage Pressure Regulators



S3

1 SCOPE

The **\$3** series regulators are a line of direct action type pressure regulators, double stage, normally used for domestic applications, if directly assembled to the meter or in decompression installations in gas grids and industrial uses for natural and manufactured gas, lpg, or other non-corrosive preliminarily treated stable gas.



2 FEATURES

- · Body in zamak (ZA4G)
- · Safety: Fixed UPSO and excess of flow
- · Built-in pressure relief valve
- · UPSO device available with manual re-arming
- · Fixed setting point or adjustable setting
- · Anti-Tampering construction
- · In accordance to NF E29-190-2 (05/11) + NF404

3 TECHNICAL DATA

	Layout	inlet Pressure	Outlet Pressure	Nominal Capacity (m³/h)	Regulating class (AC)	Closing pressure class		Connections
\$3	N	0,5 ÷ 5	11 ÷ 37 11 ÷ 100 (adjustable version)	6	- up to 10	up to 20	-20 ÷ 60	See table

Available layout:

N: Angle connection

8

Pilot Operating Pressure Regulators



S4

1 SCOPE

The **\$4** series regulators are a line of direct action type pressure regulators, double stage, normally used for domestic applications, if directly assembled to the meter or in decompression installations in gas grids and industrial uses for natural and manufactured gas, lpg, or other non-corrosive preliminarily treated stable gas.



2 FEATURES

- · Body in zamak (ZA4G)
- · Available as type B (equipped with excess flow)
- · Available as type C (equipped with excess flow and OPSO)
- · Available as type D (UPSO and OPSO)
- · Built-in pressure relief valve
- · UPSO device with manual and/or automatic re-arming
- · Available with fixed setup or adjustable setting
- · Pressure test nipple
- · Painting on request
- · Arctic version: working temperature -40 ÷ 60°C

3 TECHNICAL DATA

	Layout	inlet Pressure	inlet Pressure	Outlet Pressure	Nominal Capacity	Regulating class	Closing pressure	Working	Conne	ections
	Layout			(m ³ /h)	(AC)	class	temp. (°C)	inlet	Outlet	
		bar	mbar			(SG)				
		0,5 ÷ 5			40					
	N			50		up to 10		3/4" 1" 1"1/4	1" 1"1/4 1"1/2 2"	
S4			11 ÷ 100	60						
34			11 ÷ 100	70			-20 ÷ 60			
	М			80	up to 5					
				100				1"	1"1/2	
	S4 N			30				1″1/4	2"	
S4 BCH		1 ÷ 5	100 ÷ 300	40						
ВСП	M			50						

- · M: Straight connection
- N: Angle connection



Double Stage Pressure Regulators

S7

1 SCOPE

The **\$7** series regulators are a line of direct action type pressure regulators, double stage, normally used for domestic applications, if directly assembled to the meter or in decompression installations in gas grids and industrial uses for natural and manufactured gas, lpg, or other non-corrosive preliminarily treated stable gas.



2 FEATURES

- · Body in aluminium die-cast
- · Diaphragms in rubber (with cloth enforcement for MP version)
- · Available with or without OPSO UPSO and excess of flow
- · Adjustable OPSO and UPSO
- · Built-in pressure relief valve
- · Built-in filter
- · Pressure test nipple
- · Manual re-arming with anti-reset device
- · Fully maintainable
- · Adjustable settings
- · Painting on request
- · For Reference User Guide 50

3 TECHNICAL DATA

	Variants	Inlet Pressure	Outlet Pressure	Nominal Capacity (m³/h)	Regulating class (AC)	Closing pressure class (SG)	Working temp. (°C)	Connections
		bar	mbar	(/ /	(AC)	(30)	()	
	ВР	0,5 ÷ 6	14 ÷ 150	6				
67					up to 5	10	30 (0	
S7				10	up to 5	up to 10	-30 ÷ 60	See table
	MP	1 ÷ 6	150 ÷ 450	25				

- · L: Straight connection
- · S: Angle connection
- · U: Bottom entry

Single Stage Pressure Regulators



S10

1 SCOPE

The **\$10** series regulators are a line of direct action type pressure governors, normally used for domestic applications, generally installed directly to the meter or in installations in gas grids for natural and manufactured gas, lpg, or other non-corrosive preliminarily treated stable gas.



2 FEATURES

- · Body in alluminium die-cast
- · Shut-off in case of excess of flow
- · Available as type A (regulator)
- · Available as type F (regulator + UPSO)
- · UPSO device with automatic or manual re-arming
- · Full discharge or partial relief valve
- · Adjustable setting
- · Built-in filter
- · Suitable for outdoor installation
- · Painting on request

3 TECHNICAL DATA

	Layout	inlet Pressure	Outlet Pressure	Nominal Capacity (m³/h)	Regulating class (AC)	Closing pressure class (SG)	Working temp. (°C)	Connections
		bar	mbar	(/ /	(117)	()	(-,	
	н			4				
S10	п	0,2 ÷ 1	12 ÷ 150	6		up to 20	-20 ÷ 60	1/2" 3/4"
	М	1 ÷ 5	12 / 130	10	up to 10			
\$10	н	1 ÷ 5	150 ÷ 400	15				
310	М	1÷3	150 ÷ 400	13				

- \cdot H: Angle Horizontal connection
- · M: Straight connection



Double Stage Pressure Regulators



S8

1 SCOPE

The **\$8** series regulators are a line of direct action type pressure regulators, double stage, normally used for domestic applications, if directly assembled to the meter or in decompression installations in gas grids and industrial uses for natural and manufactured gas, lpg, or other non-corrosive preliminarily treated stable gas.



2 FEATURES

- · Body in zamak (ZA4G)
- · Available as type B (excess flow)
- · Available as type C (excess flow and OPSO)
- · Available as type D (UPSO and OPSO)
- · Built-in pressure relief valve
- · Built-in filter
- · UPSO device with manual re-arming
- Fixed settings
- · Pressure test nipple

3 TECHNICAL DATA

	Inlet Pressure	Outlet Pressure	Nominal	Regulating class	Closing	Working	Connections		
	bar	mbar	Capacity (m³/h)	(AC)	pressure class (SG)	temp. (°C)	Inlet	Outlet	
\$8	0,5 ÷ 5	11 ÷ 100	100			20 . (0	3/4"	1″1/2	
\$8 BCH	0,8	300	125	up to 5	up to 10	-20 ÷ 60	1"	2"	

- · N: Angle connection
- · U: Bottom entry



Spring Loaded Pressure wRegulators



S5-S6

1 SCOPE

The **\$5** and **\$6** regulator due to their operating specifications are mainly used in those system where sudden capacity varations are required, or else, where the cut-off of the gas distribution is controlled by solenoid valve.

They can be used with natural gas, air, propane and other gases, as long as they do not containe a high percentage of benzole.



2 FEATURES

- · Body in cast iron
- · Covers in aluminium die-cast
- · Diaphragms in rubber with cloth enforcement
- · Safety device with manual re-arming
- · Adjustable setting
- · Full discharge or partial relief valve
- · Thraded connections in accordance to BSP and NPT (ISO)
- · Flange in accordance to
- · Gas loss protection (optional)
- · In accordance to 2014/68/EU EN334

3 TECHNICAL DATA

	Versions	inlet Pressure	Outlet Pressure	Regulating class (AC)	Closing pressure class (SG)	Working temp. (°C)	CG (valve coefficient)	Connections
		bar	mbar	(/)	(30)			
\$5	A						105	1" x 1" 1" x 1"1/4
S6	L	05.0	9 ÷ 400	up to 5	up to 10	-20 ÷ 60	103	1 x 1"1/2
S6	н	0,5 ÷ 8	9 ÷ 400				209	1"1/4 x 1"1/4
S6	I							1"1/2 x 1"1/2 2"x 2"

Available versions:

- · A: unbalanced
- · L: balanced
- · H: balanced + OPSO shut-off valve
- · I: balanced + OPSO/UPSO shut-off valve



Spring Loaded Pressure Regulators



S21

1 SCOPE

The **\$21** regulators are a new line of pressure regulators – direct operating type – designed to guarantee a high regulation accuracy and a utmost easiness in use. These devices are usually used in distribution and industrial systems and are designed to be installed in regulation units in gas grids of natural, manufactured and lpg gas or other non corrosive gases, filtered at first.



2 FEATURES

- · Body in cast iron or steel
- · Covers in aluminium die-cast
- · Diaphragms in rubber with cloth enforcement
- · Seats in stainless steel
- · Springs in stainless steel
- · Counterbalanced
- · Anti-pumping device
- · Diaphragm shock adsorber or relief valve
- Top entry
- · In accordance to 97/23 EC (PED) EN334
- · For reference see User Guide 100

3 TECHNICAL DATA

	Inlet P	ressur	re		Outlet Pressure				Closing	Working	CG (valve	Con-
	BP, MP, AP	APS	APA	BP	MP	AP, APS	AP, APA	class	pressure class	temp. (°C)	coefficient)	nections
	b	ar				mbar				、		
\$21	5 or 6	19				500 ÷ 4000					160	1" x 1"
\$21	5 or 6		19	14 ÷ 150	150 ÷ 500		500 ÷ 4000	up to 5	up to 10	-20(-30) ÷ 60	281	1"x1"1/2
S21	5 or 6		19				500 ÷ 4000				410	1"x1"1/2

Available versions:

· B: with OPSO/UPSO shut-off valve



Spring Loaded Pressure Regulators



S22

1 SCOPE

The **\$22** are a new line of pressure regulator – spring loaded – suitable for use in canalized nets of low and medium pressure with non-corrosive gas filtered at first.

The feature peculiar to IPR regulators is the trivalent operating, i.e. in a single body is united the following operations: main regulator, monitor, shut-off valve.

Special use of a single body allows to reduce overall dimensions of regulation units and solve problems of replacement or conversion of existing units out of standard.



2 FEATURES

- · Body in cast iron or steel
- · Covers in aluminium die-cast
- · Diaphragms in rubber with cloth enforcement
- · Seats in stainless steel
- · Springs in stainless steel
- · Counterbalanced
- · Anti-pumping device
- · Diaphragm shock adsorber
- Top entry
- In accordance to 97/23 EC (PED) EN334
- · For reference see User Guide 100

3 TECHNICAL DATA

	Variants	inlet Pressure		Outlet Pressure			Regulating	Closing pressure	Working	CG (valve	C					
	variants	BP, MP, AP	APA	BP	MP	AP, APA	class	class	temp. (°C)	coefficient)	Connections					
		bar			mbar			Class								
	В															
S22	X	5 or 6	5 or 6							574	DN40					
	XB	3 3. 3			19	14 - 150	150 - 500	500 ÷ 4000	up to 5	up to 10	-20(-30) ÷ 60					
	В						'	12	14 - 130	130 + 300	300 ÷ 4000	up to 3	up to 10	-20(-30) ÷ 60		
S22	Х	5 or 6								1160	DN50					
	ХВ															

- · X: With built-in emergency regulator and shut-off valve
- · XB: With built-in double shut-off valve



Spring Loaded Pressure Regulators



S23

1 SCOPE

The **\$23** Regulators are a new line of pressure regulators – direct operating type – designed to guarantee a high regulation accuracy and a utmost easiness in use. These devices are usually used in distribution and industrial systems and are designed to be installed in regulation units in gas grids of natural, manufactured and lpg gas or other non corrosive gases, filtered at first.



2 FEATURES

- · Body in cast iron or steel
- · Covers in pressed steel
- · Diaphragms in rubber with cloth enforcement
- · Seats in stainless steel
- · Springs in stainless steel
- · Counterbalanced
- · Anti-pumping device
- · Diaphragm shock adsorber
- · Top entry
- · In accordance to 97/23 EC (PED) EN334
- · For reference see User Guide 200

3 TECHNICAL DATA

	Inlet Pre	ssure		Outle	et Pressure		Regulating	egulating Closing pressure class	pressure temp.	CG (valve coefficient)	Connections
	BP, MP, AP	APA	BP	MP	AP	APA	class				
	baı	•			mbar						
\$23	5 or 6	19 14 ÷	14 ÷ 80	75 ÷ 500	470 ÷ 2000	2000 ÷ 4000	up to 5	up to 10	-20 ÷ 60 °C		DN50
\$23	5 or 6	12	17700	73 - 300	770 7 2000	2000 - 4000	ар 10 3	ар to 10	-20 + 00°C	3380	DN80

- · B: with built-in OPSO/UPSO shut-off valve
- · M: with built-in Monitor
- MB: with Monitor and shut-off valve



Pilot Operating Pressure Regulators



S24

1

SCOPE

\$24 are a new line of pressure regulator – pilot-controlled – suitable for use in canalized nets of low and medium pressure with non-corrosive gas filtered at first.

The feature peculiar to TPR regulators is the trivalent operating, i.e. in a single body is united the following operations: main regulator, monitor, shut-off valve.

Special use of a single body allows to reduce overall dimensions of regulation units and solve problems of replacement or conversion of existing units out of standard.



2 FEATURES

- · Body in cast iron or steel
- · Covers in steel
- · Diaphragms in rubber with cloth enforcement
- · Seats in stainless steel
- · Springs in stainless steel
- · Counterbalanced
- · Anti-pumping device
- · Diaphragm shock adsorber
- Top entry
- · In accordance to 97/23 EC (PED) EN334
- · For reference see User Guide 400

3 TECHNICAL DATA

	Variants	Inlet Pressure (bar)	Outlet Pressure (mbar)	Regulating class	Closing pressure class	Working temp. (°C)	CG (valve coefficient)	Connections
S24	B X						574	DN25
\$24	B X	20	10 ÷ 12000	up to 1	up to 5	-20 ÷ 60	2250	DN50
\$24	B X						4950	DN80

- · M: With built-in emergency regulator
- · B: With built-in OPSO/UPSO shut-off valve
- · X: With monitor and shut-off valve



Pilot Operating Pressure Regulators



S25

1 SCOPE

\$25 are a new line of pressure regulator – pilot-controlled – suitable for use in high pressure gas network with non-corrosive gas filtered at first.

The feature peculiar to APR regulators is the trivalent operating, i.e. in a single body is united the following operations: main regulator, monitor, shut-off valve.

Special use of a single body allows to reduce overall dimensions of regulation units and solve problems of replacement or conversion of existing units out of standard.



2 FEATURES

- · Body in steel
- · Covers in steel
- · Diaphragms in rubber with cloth enforcement
- · Seats in stainless steel
- · Springs in stainless steel
- · Counterbalanced
- · Anti-pumping device
- · Diaphragm shock adsorber
- · Top entry
- · In accordance to 97/23 EC (PED) EN334
- · For reference see User Guide 300

3 TECHNICAL DATA

	Variants	Inlet Pressure (bar)	Outlet Pressure (bar)	Regulating class	Closing pressure class	Working temp. (°C)	CG (valve coefficient)	Connections
\$25	B X						574	DN25
\$25	B X	100	0,5 ÷ 40	up to 1	up to 5	-20 ÷ 60	2250	DN50
\$25	B X						4950	DN80

- · M: With built-in emergency regulator
- · B: With built-in OPSO/UPSO shut-off valve
- · X: With monitor and shut-off valve



Safety valves



S26

1 SCOPE

\$26 safety valves are a new line of products – direct operating type – designed to guarantee a utmost easiness in use. These devices are usually used in distribution and industrial systems and are designed to be installed in regulation units in gas grids of natural, manufactured and lpg gas or other non corrosive gases, filtered at first.



2 FEATURES

- · Body in cast iron or steel
- · Diaphragms in rubber with cloth enforcement
- · Seats in stainless steel
- · Springs in stainless steel
- · In accordance to 97/23 EC (PED) EN334
- · For reference see User Guide 500

3 TECHNICAL DATA

	Inlet Pressure (bar)	Outlet Pressure (mbar)	Working temp. (°C)	CG (valve coefficient)	Connections
\$26				160	1" x 1"
\$26	5 or 6 or 20	10 ÷ 4000	-20 (-30) ÷ 60	281	1" x 1"1/2
\$26			410	1" x 1"1/2	
\$26				574	DN40
\$26	\$26 5 or 6 or 20	10 ÷ 4000	-20 (-30) ÷ 60	1160	DN50
\$26				3380	DN80



Relief valves



S27

1 SCOPE

The Relief valves **\$27** are devices which function is to maintain the pressure in the system or in pressure vessels within the limit set for the intervention.

These devices intervene following short-term events, providing to discharge externally a certain quantity of gas when the grid pressure exceeds the calibration pressure, thus avoiding or postponing the intervention of the slam shut devices.



2 FEATURES

- · Body in aluminium die-cast or steel
- · Diaphragms in rubber with cloth enforcement
- · Seats in brass
- · Springs in stainless steel

3 TECHNICAL DATA

Design Pressure			Pressure ra	anges (bar)	Seat diameter	Working temp.	
	(bar)	ВР	MP	AP	APtr	(mm)	(°C)
\$27	6	0 ÷ 0.15	0,15 ÷ 0,7	0,5 ÷ 1,3	1 ÷ 2,8	20	-20 ÷ 60
\$27	10			2 ÷ 7		20	23 7 00



Regulators equipped with anti-flooding hood



SS/BE/20140209 - Version 1

We have conceived an anti-flood system, covering a surface of 10600 mm2, to be fitted to the whole range of the regulators designed for residential applications, buried version (regulator with capacity equal to or below 50m³/h). The "anti-flooding hood" system described above is therefore adaptable to all our models for series S1, S3 and S4.

Thanks to this system, the gas-regulator can be easily reset or put into service and the connections can be disassembled without any need of system dismantling. An identification plate, identical to that of the regulator, can be positioned into the anti-flooding hood. Some materials composing the regulator and in contact with the surrounding atmosphere shall be submitted to surface treatment in order to increase the product longevity in a very humid environment or subject to flood.

The parts in contact with the atmosphere made of: - Zamak will be covered with an electrolytic protective layer (dichromated zinc coating 18µ); - Aluminium shall undergo a chemical reaction (anodizing). The springs in contact with the atmosphere must be in stainless steel. (resetting lever, first and second stage pressure regulating spring).

The designs of these regulators foresee that all vents will be protected by this system.

B6M - \$1















Conversion Table

CONVERSION FACTORS

Multiply	Ву	To Obtain			
LENGTH & AREA					
Millimeters	0.0394	Inches			
Meters	3.2808	Feet			
Sq. Centimeters	0.155	Sq. Inches			
Sq. Meters	10.764	Sq. Feet			
VOLUME & MASS					
Cubic Meters	35.315	Cubic Feet			
Liters	0.0353	Cubic Feet			
Gallons	0.1337	Cubic Feet			
Cubic cm.	0.061	Cubic Inches			
Liters	2.114	Pints (US)			
Liters	0.2642	Gallons (US)			
Kilograms	2.2046	Pounds			
Tonnes	1.1024	Tons (US)			
PRESSURE & FLOW	RATE				
Millibars	0.4018	Inches w.c.			
Ounces/sq. in.	1.733	Inches w.c.			
Inches w.c.	0.0361	Pounds/sq. in.			
Bars	14.50	Pounds/sq. in.			
Kilopascals	0.1450	Pounds/sq. in.			
Kilograms/sq. cm.	14.222	Pounds/sq. in.			
Pounds/sq. in.	0.068	Atmospheres			
Liters/hr.	0.0353	Cubic Feet/hr.			
Cubic Meters/hr.	4.403	Gallons/min.			
MISCELLANEOUS					
Kilojoules	0.9478	BTU			
Calories, kg	3.968	BTU			
Watts	3.414	BTU/HR			
BTU	0.00001	Therms			
Megajoules	0.00948	Therms			

CONVERSION FACTORS

Multiply	Ву	To Obtain
LENGTH & AREA		
Inches	25.4	Millimeters
Feet	0.3048	Meters
Sq. Inches	6.4516	Sq. Centimeters
Sq. Feet	0.0929	Sq. Meters
VOLUME & MASS		
Cubic Feet	0.0283	Cubic Meters
Cubic Feet	28.316	Liters
Cubic Feet	7.481	Gallons
Cubic Inches	16.387	Cubic cm.
Pints (US)	0.473	Liters
Gallons (US)	3.785	Liters
Pounds	0.4535	Kilograms
Tons (US)	0.9071	Tonnes
PRESSURE & FLOW R	ATE	
Inches w.c.	2.488	Millibars
Inches w.c.	0.577	Ounces/sq. in.
Pounds/sq. in.	27.71	Inches w.c.
Pounds/sq. in.	0.0689	Bars
Pounds/sq. in.	6.895	Kilopascals
Pounds/sq. in.	0.0703	Kilograms/sq. cm.
Atmospheres	14.696	Pounds/sq. in.
Cubic Feet/hr.	28.316	Liters/hr.
Gallons/min.	0.2271	Cubic Meters/hr.
MISCELLANEOUS		
BTU	1.055	Kilojoules
BTU	0.252	Calories, kg
BTU/HR	0.293	Watts
Therms	100,000	BTU
Therms	105.5	Megajoules

FLOW EQUIVALENTS

To convert flow capacities of one kind of gas to flow capacities of a different kind of gas.

		MULTIPLY BY:
If you have a flow capacity (CFH, etc.) in NATURAL GAS and want to know equivalent flow capacity of—	Propane: Butane: Air:	0.55
If you have BUTANE and want to know equivalent flow capacity of—	Propane: Butane: Air:	1.83
If you have AIR and want to know equivalent flow capacity of—	Propane: Butane: Air:	0.71
If you have PROPANE and want to know equivalent flow capacity of—	Propane: Butane: Air:	

FLOW EQUIVALENTS

		MULTIPLY BY:
If you have 1Kg of LPG(*) and want to know equivalent flow capacity of—	m³ Natural Gas: litre of LPG(*):	1.333 1.770
If you have 1 m³ of Natural Gas and want to know equivalent flow capacity of—	kg of LPG(*): litre of LPG(*):	0.750 0.692
If you have 1litre of LPG(*) and want to know equivalent flow capacity of—	m³ Natural Gas: kg of LPG(*):	1.446 0.565
(*) LPG is a commercial mixture of Pi percentages so, the correction factor composition.	•	

Manufacturing Facilities





Gas Solutions

Mesura S.A.S. **TECHNOPOLE FORBACH SUD** Rue Robert BUNSEN - CS 50102 - 57602 FORBACH CEDEX - France www.mesura.fr

Cavagna Group Division RECA via Matteotti 5 - 25012 - Viadana di Calvisano (BS) - Italy Tel: +39 030 9688611 info@cavagnagroup.com www.cavagnagroup.com